*Fig. 1*

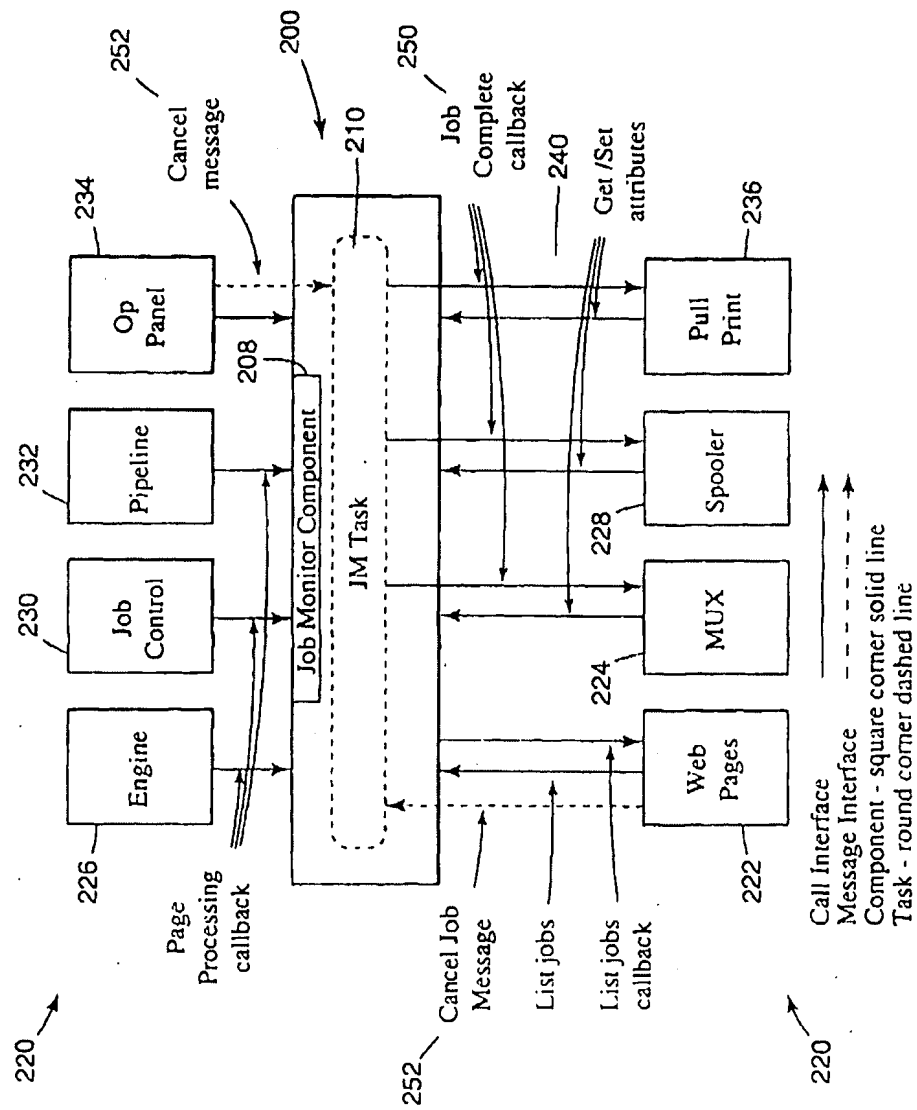


Fig. 2

300

Attribute	Description	Initial Value
Job ID	Job ID	JobID
PCM ID	ID of the PCM through which the job was received	Null
Personality	Personality of the PCM through which the job was received	Null
PCM Priority	Priority of the PCM through which the job was received	Null
MUX receive byte count	Number of bytes received by the MUX through calls to the apSPIDData routine by a primary source PCM. This includes all PCMs except the despooler (it is not a primary source PCM)	0
URL of the job	URL of the job (pull print only)	Null
Output request attribute for the job	Output requested by PCM for the job(Printer, Spooler, Either)	PRINTER
Output assignment attribute	Output assignment attribute for tile job (Printer, Spooler, Wait, Rejected)	Null
File format indicator (PDF)	File format indicator (PDF)	NORMAL
MUX Job State	State of the job in the MUX	Unknown
Spooler Job State	State of the job in the spooler	NotSpooled
Interpreter Job State	State of the job in the interpreter	WaitingFor Job
Engine Job State	State of the job in the engine	WaitingFor Job
PMDD bytes read	This is the number of bytes read by the interpreter through calls to the PMDD Read routine.	0
MUX printer output status	Status of output to printer (not started, in progress, completed)	NotStarted
MUX Spooling status	Status of job being spooled (not started, in progress, completed)	NotStarted
Timestamp	Timestamp (printer up time ) of last attribute update	Uptime

Fig. 3

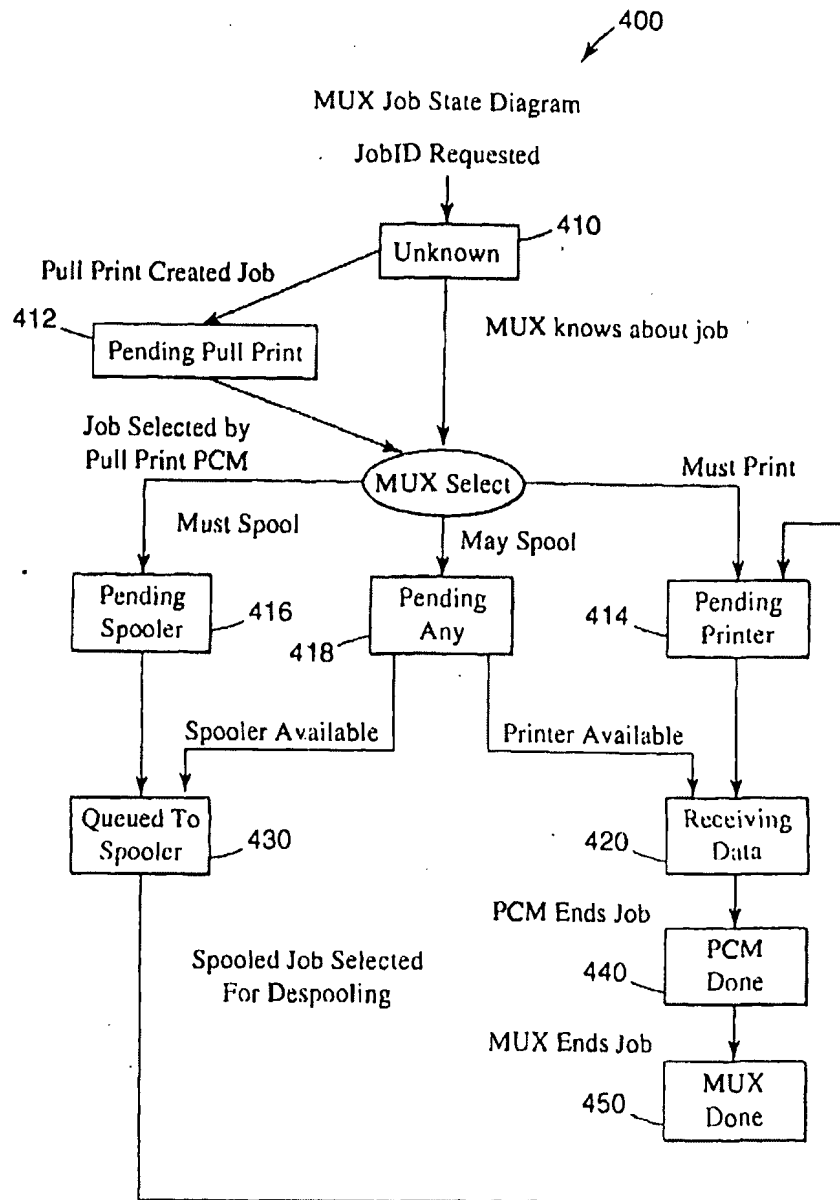
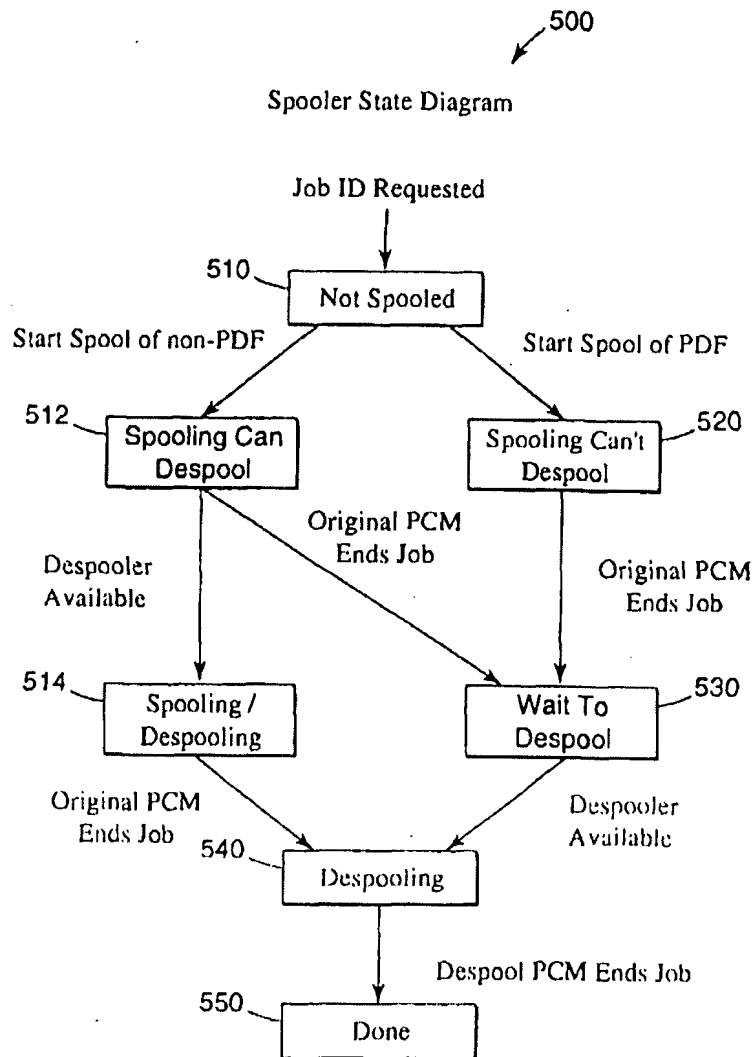
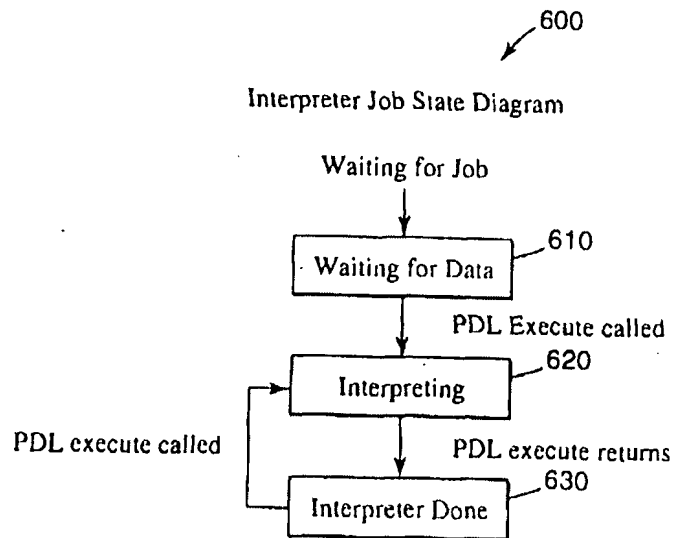
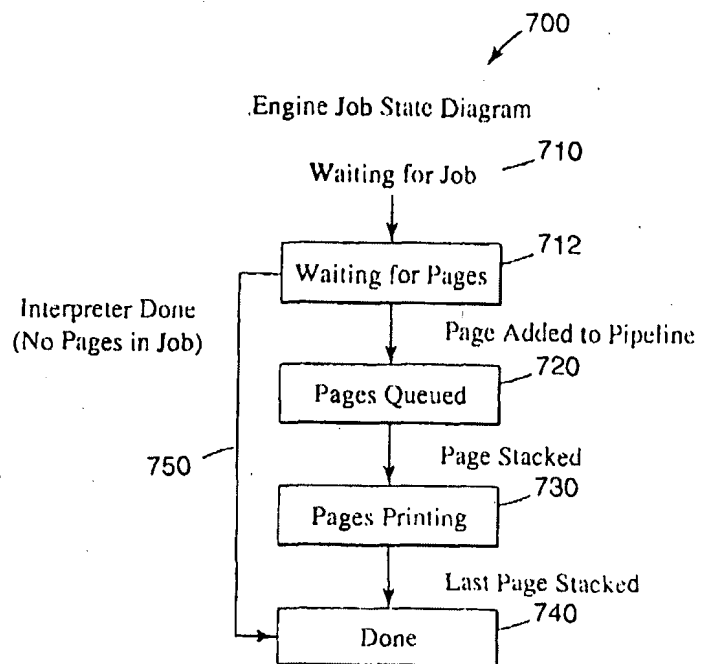


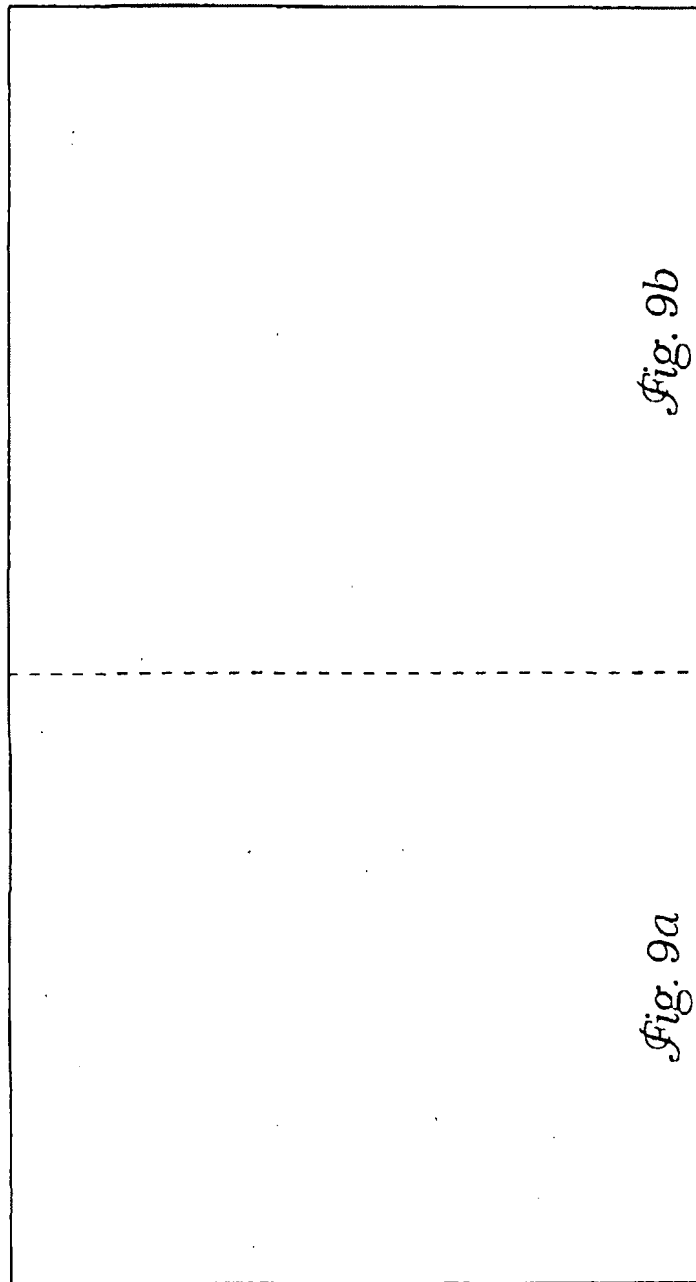
Fig. 4

*Fig. 5*

*Fig. 6**Fig. 7*

Process	From State	To State	Changed by
MUX	Unknown	Pending Printer	MUX OS Thread
	Unknown	Pending Any	MUX OS Thread
	Unknown	Pending Spooler	MUX OS Thread
	Unknown	Pending Pull Print	Pull Print wppSubmitJob
	Pending Printer	Receiving Data	MUX OS Thread
	Pending Any	Receiving Data	MUX OS Thread
	Pending Spooler	Queued to Spool	MUX OS Thread
	Pending Any	Queued to Spool	MUX OS Thread
	Queued to Spool	Pending Printer	MUX OS Thread
	Receiving Data	Done	MUX apsPDIEnd
Spooler	Not Spooled	Spooling Can Despool	sp-open
	Spooling Can Despool	Spooling / Despooling	sp-eoj
	Spooling Can Despool	Waiting to Despool	sp-eoj
	Spooling / Despooling	Despooling	Despool PCM
	Not Spooled	Spooling Can't Despool	sp-open
	Spooling Can't Despool	Waiting to Despool	sp-eoj
	Waiting to Despool	Despooling	Despool PCM
	Despooling	Done	Despool PCM
Interpreter	any	any	event :announce callback
Engine	any	any	event :announce callback

Fig. 8



*Fig. 9*



900

Attribute ID <sup>910</sup>	Type <sup>912</sup>	Rel.	RO/ RW <sup>914</sup>	IPP	SNMP
JM-ATTR-JOB-ID	Int	1	RO		
JM-ATTR-PCM-ID	Int (Enum)	1	RW		
JM-ATTR-PCM-PERSONALITY	Int (Enum)	1	RW		
JM-ATTR-PCM-PRIORITY	Int	1	RW		
JM-ATTR-SPOOLED-BYTES	Int	1	RW		
JM-ATTR-URL	String	1	RW		
JM-ATTR-OUTPUT-REQUEST	Int (Enum)	1	RW		
JM-ATTR-FILE-FORMAT	Int (Enum)	1	RW		
JM-ATTR-MUX-STATE	Int (Enum)	1	RW		
JM-ATTR-SPOOL-STATE	Int (Enum)	1	RW		
JM-ATTR-INTERPRETER-STATE	Int (Enum)	1	RO		
JM-ATTR-ENGINE-STATE	Int (Enum)	1	RO		
JM-ATTR-JOB-STATE	Int (bitfields or array of int's?)	1	RO	Yes	Yes
JM-ATTR-PAGES-SUBMITTED	Int	1	RO		
JM-ATTR-TOTAL-PAGES IN JOB	Int	1	RO		
JM-ATTR-TOTAL PAGES STACKED	Int	1	RO		
JM-ATTR-RECEIVED-BYTES	Int	1	RW		
JM-ATTR-BYTES-PROCESSED	Int	1	RW		
JM-ATTR-LAST-MODIFIED	Int	1	RO		
JM-ATTR-CANCEL-INITIATOR	Int (Enum)	1	RW	Yes	Yes
JM-ATTR-CANCEL	Int	1	RW		
JM-ATTR-OPEN COUNT	Int	1	RO		
JM-ATTR-COPY-SET	Int	1	RO		
JM-ATTR-COPY-COUNT	Int	1	RO		
JM-ATTR-COLLATE	Int	1	RW		
JM-ATTR-DUPLEX	Int	1	RW		

Fig. 9a

900

920

Notes
Set by JM.
Set by MUX.
Set by MUX.
Set by MUX.
Set by MUX.
Set by MUX.
Set by WPP.
Set by MUX. Enum will contain PRINTER, SPOOLER, WAIT, REJECTED. Others will be added if needed.
Set by MUX. Enum will contain at least UNKNOWN and PDF. Others will be added as needed.
Set by MUX. Enum will be created to list the possible states.
Set by SPOOLER. Enum will be created to list the possible states.
Set by JM. Enum will be created to list the possible states.
Set by JM. Enum will be created to list the possible states.
Done by JM. Convert from JM-ATTR * STATE attributes
Set by JM. This is the number of pages submitted into the pipeline by the interpreter (incremented once for each page, regardless of the copy count).
Set by JM. This is the total number of pages, including all copies of each page, which have been submitted into the pipeline.
Set by JM. This is the total number of pages that have been stacked by the engine (incremented for each copy of a page).
Set by MUX. The MUX should ensure that this is not double when we are spooling (ie, the bytes should only be counted when they are received from the host, not from the spooler.)
Set by PMDD
Set by JM. This is a timestamp (or count) used to tell if data modified since last checked this value.
Set by requester of cancel. This is who requested the cancel (operator, user, device)
Set by JM (or JPDS?). 0 if not cancelling, 1 if cancel initiated
Set by JM. Not read by others. Used to know how many people have this handle open (have not called destroy yet).
Set by JM. This is the set for the last page stacked if doing collation.
Set by JM. This is the copy count for the last page stacked if doing collation.
True if collated job, false otherwise.
True if job is duplex, false otherwise.

Fig. 9b